

Drawings

The drawings filed April 21, 2008 are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "hidden brackets;" the hidden brackets and long and short mandrels being assembled "in a single line;" and the "support" of the hidden bracket being "not exposed to the outside" as set forth in claim 1 must be shown or the features canceled from the claim.

No new matter should be entered.

The drawings are objected to because the reference character "24" is used for two different elements.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The abstract of the disclosure is objected to because in line 3 of the abstract filed April 21, 2008 the word "from" should be changed to - -form- -. Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities:

On pages 1 and 4 of the substitute specification filed April 21, 2008, the utility model and the patent are listed by their serial numbers, but the country of origin is not provided.

The term "bat-shaped" bracket is objected to as indefinite because a bat may have several different shapes such as a baseball bat or a flying mammal. It is suggested that Applicant find a better term which characterizes the shape of the bracket 3, such as - -curved- - or - - concave- -, or delete the term "bat-shaped" altogether.

On page 5, the term "is riveted 22 to the right base" is objected to. The reference character 22 can refer to a rivet or a point at which something is riveted, but can refer to a "riveted" as it currently does. The drawings do not currently show a rivet.

On pages 5 and 6, the reference character "24" is used for two different elements.

The reference characters "19" and "25," added to the drawing figures, are not described in the specification.

Appropriate correction is required.

The amendment filed April 21, 2008 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: On page 1, line 19 (according to Applicant's numbering) has been amended to change the phrase "which causes the wheel carrier with big deflection moment" to with big" to - which causes the wheel carrier to produce a large deflection moment" - -. This is considered to be new matter because the disclosure, as originally filed, did not provide support for the wheel carrier being the element which causes the deflection moment.

On page 5 the term "flat grooves" has been amended to - flat trapezoidal grooves 20- -, and the reference character - 20- - has been added to figure 7. The original figure 7 had no reference characters and there was no indication that the elements now labeled "20" were grooves and not through holes, or even raised portions. Therefore, to call the elements 20 "grooves" now is considered to be new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter.

There is no description of the "hidden brackets" set forth in the claims as amended.

There is no detailed description of the hidden brackets and the long and short mandrels assembled "as a single line" along the circumference of the wheel as now claimed in claim 1. This feature is mentioned briefly in lines 18 and 19 of page 3, but does not provide enough detail to allow one of ordinary skill in the art to understand what is meant by the term "as a single line" and further, this straight line feature does not appear to be shown in the drawings. Therefore the disclosure is non-enabling for this feature.

There is no description of the "support" for the hidden bracket being "not exposed to the outside" as set forth in amended claim 1. The specification does not appear to describe any parts of the wheel assembly as being hidden or unexposed. Further, the specification does not even appear to describe a "support" for the hidden bracket.

See 37 CFR 1.75(d)(1) and MPEP § 608.01(o).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As noted above, the disclosure provides little description of the hidden brackets and the long and short mandrels assembled "as a single line" along the circumference of the wheel as now claimed in claim 1. There is no detailed description of this feature and the disclosure is non-enabling for this limitation in claim 1.

Further, it is not clear which element(s) is being referred to by the "support" of the hidden bracket as now set forth in claim 1.

Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. As noted above, the limitation of the "support" for the hidden bracket being "not exposed to the outside" as now set forth in claim 1.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The "support" of the hidden bracket in line 15 of claim 1 lacks proper antecedent basis in that claim, rendering the claim indefinite.

Claim 1 is indefinite because it is not clear what is referred to by the "outside" as it appears in the last line of claim 1.

Claims 1-4 are examined on the merits as they are best understood.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith.

Smith discloses a universal wheel comprising pairs of large drum-shaped rollers 96 and small drum-shaped rollers 100 mounted in a bracket 80 and provided with bearings to facilitate rotation. The bracket or brackets have protruding members 82, 84,

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86 having grooves to receive the mandrels of the rollers. As shown in figure 5, the protruding members 82, 84, and 86 appear to be arranged in a straight line in the circumferential direction.

The bracket(s) would inherently have left and right, and upper and lower portions, depending on the orientation of the wheel. The bracket 80 is considered to be bat-shaped as defined in the claims, and further to have tilted parts as shown in figures 5 and 6.

The small rollers 96 have shafts 94 and the shaft of the large rollers 100 are unlabelled. Smith does not specify which shaft would be long and which would be short. However, those of ordinary skill in the art could readily determine suitable lengths for the shafts of each of the rollers, and to use shorter shafts for the large rollers and longer shafts for the small rollers would have been obvious as a mechanical expedient in order to properly mount the rollers.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith as applied to claim 1 above, and further in view of Dean.

The shafts of Smith do not show half-moon shaped heads.

Dean teaches a universal roller in which the rollers are mounted on shafts having ends which include a flat surface, forming a half-moon shape when viewed from the end of the shaft. The ends are fitted into similar shaped holes in the bracket and the shafts are prevented from rotating.

From this teaching it would have been obvious to modify the wheel assembly of Smith and substitute shafts having half-moon shapes ends to be inserted in holes of similar shape in order to prevent rotation of the shaft, thereby allowing the rollers to rotate around the shafts on the bearings.

Response to Arguments

Applicant's arguments filed April 21, 2008 have been fully considered but they are not persuasive.

Applicant argues that the wheel rim formed by the rollers in the instant invention is in a single line and the rollers of Smith form a rim which is in two lines. This is believed to be inaccurate because nowhere in the Smith patent does there seem to be a reference to two lines or two rows of rollers. Further, a close inspection of figures 4 and 5 of Smith show the rollers 96, 100 to be arranged in a single or straight line. Although shown in perspective, the bracket 80 has arms and projections 82, 84, 86 which are shown to be aligned in the circumferential direction. Note the bearing-receiving grooves (unlabelled) in the outer ends of the brackets. The mandrels would be aligned inasmuch as they are coaxial with the bearings.

Figure 6 of Smith confirms that the rollers 96, 100 are arranged in a straight or single line. The end portions 90 of the rollers 96 include a recess (unlabelled) into which the end portions of the rollers 100 may extend. This groove would not be necessary if the rollers 96 and 100 were not aligned in the circumferential direction.

With respect to the arguments that the "supporting site" of the roller is not exposed, the mandrels 94 of Smith do not appear to be exposed. Moreover, the limitation in the claim recites that it is the support for the hidden bracket which is not exposed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell D. Stormer whose telephone number is (571) 272-6687. The examiner can normally be reached on Monday through Friday, 9 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on (571) 272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Russell D. Stormer/

Primary Examiner, Art Unit 3617